

**REMARKS**

Claims 1, 17, 21 and 31 have been amended. Proper support for the amendment of the claims can be found in the specification, at least, at paragraphs [0035], [0043] and [0045] and in Figs. 4A-4D, 5A-5D, 6A-6D. Claims 1, 3-10, 13, 15-17, 19-21, 23-31 and 33-38 are pending and under consideration. Claims 1, 17, 21 and 31 are the independent claims. No new matter is presented in this Amendment.

**REJECTIONS UNDER 35 U.S.C. §103:**

Claims 17, 19-21, 23-25, 27-29, 31, 37 and 38 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yokoi et al. (U.S. Patent No. 5,732,062).

Regarding the rejection of independent claim 17, it is noted that claim 17 recites a method of recording data onto an optical recording medium, the method comprising: generating a recording waveform having a recording pattern for high-speed recording; and forming a first level of the data as a mark and a second level of the data as a space, using the generated recording waveform, wherein the recording pattern is formed of recording multi-pulse trains including a first pulse, a multi-pulse train, and a last pulse, wherein the multi-pulse train consists of a high write power level and a low write power level, the first pulse comprises the high write power level followed by the low write power level of the multi-pulse train, and the last pulse comprises the high write power level of the multi-pulse train followed by a bias power level, and the low write power level of the multi-pulse train is set to be higher than the bias power level of the last pulse.

The Office Action relies on Yokoi for a teaching of the first pulse, the multi-pulse train and the last pulse and in particular in Figs. 7, 17 and 27, elements Af, Ar, Br and C. The Office Action further recites that Ar and Br correspond to a high write power level, Af corresponds to a low write power level and C corresponds to a bias power level.

A careful review of Yokoi and in particular of Fig. 7 reveals a first pulse including the low write power level (Af) followed by a high write power level (Ar), a multi-pulse train including the low write power level (B which is equivalent to Af) and a bias power level, and a last pulse including the high write power level and the bias power level.

Accordingly, Fig. 7 of Yokoi fails to teach or suggest, at least, that the first pulse comprises the high write power level followed by the low write power level of the multi-pulse train, and also fails to teach or suggest that the multi-pulse train consists of the high write power level and the low write power level.

As noted above, Yokoi simply teaches a multi-pulse train including the low write power level and the bias power level.

Regarding Fig. 17 of Yokoi, it is noted that this figure teaches a first pulse including the low write power level (Af) followed by the high write power level (Ar), a single pulse including the low write power level (B which is equivalent to Af), and a last pulse including the high write power level and the bias power level.

Accordingly, Fig. 17 of Yokoi also fails to teach that the first pulse comprises the high write power level followed by the low write power level of the multi-pulse train, and also fails to teach or suggest a multi-pulse train altogether. As noted in Fig. 17, Yokoi simply discloses a single pulse.

Regarding Fig. 27, it is noted that this figures teaches a first pulse including the high write power level (Af) followed by the low write power level (Ar), a multi-pulse train including the high write power level and the bias power level, and a last pulse including the low write power level and the bias power level.

Accordingly, Fig. 27 of Yokoi also fails to teach or suggest that the multi-pulse train consists of the high write power level and the low write power level, as recited in the independent claim. As illustrate in Fig. 27, Yokoi simply teaches a multi-pulse train including the high write power level and the bias power level.

Therefore, Applicants respectfully assert that Yokoi fails to teach or suggest the novel features of independent claim 17.

Regarding the rejection of independent claims 21 and 31, it is noted that these claims recite some substantially similar features as claim 17. Thus, the rejections of these claims are also traversed for at least the reasons set forth above.

Furthermore, Applicants respectfully assert that dependent claims 19, 20, 23-25, 27-29, 37 and 38 are allowable at least because of their dependency from claims 17, 21 and 31 and because they include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 19, 20, 23-25, 27-29, 37 and 38 also

distinguish over the prior art.

Claims 1, 3-10, 13, 15-16 and 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yokoi et al. (U.S. Patent No. 5,732,062) and in further view of Furukawa et al. (U.S. Patent No. 6,343,062).

Regarding the rejection of independent claim 1, it is noted that claim 1 recites an optical recording medium recording, erasing, and reproducing data, comprising: a recording layer having a specific zone in which additional recording information, including power information for high-speed recording of a recording pattern for data recording is recorded, wherein the power information indicates that the recording pattern is formed of a recording multi-pulse train including a first pulse, a multi-pulse train and a last pulse, wherein the multi-pulse train consists of a high write power level and a low write power level, the first pulse comprises the high write power level followed by the low write power level of the multi-pulse train, and the last pulse comprises the high write power level of the multi-pulse train followed by a bias power level, and the low write power level of the multi-pulse train is set to be higher than the bias power level of the last pulse.

As noted above, Yokoi does not teach or suggest that the multi-pulse train consists of a high write power level and a low write power level. As noted above, Fig. 7 simply teaches a multi-pulse train including a low write power level and a bias power level. Fig. 27, teaches a multi-pulse train including a high write power level, a low write power level and a bias power level. Finally, Fig. 17 does not teach or suggest a multi-pulse train at all. Accordingly, Yokoi fails to teach or suggest, at least, this novel feature of independent claim 1.

Furukawa, on the other hand, is relied upon for a teaching of features others than those recited above, and thus Furukawa fails to cure the deficiencies of Yokoi.

Accordingly, Applicants respectfully assert that the rejection of claim 1 under 35 U.S.C. § 103 (a) should be withdrawn because neither Yokoi nor Furukawa, whether taken singly or combined, teach or suggest each feature of independent claim 1.

Furthermore, Applicants respectfully assert that dependent claims 3-10, 13, 15, 16 and 30 are allowable at least because of their dependency from claim 1 and 21 and because they include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 3-10, 15, 16 and 30 also distinguish over the prior art.

Claims 26 and 33-36 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yokoi et al. (U.S. Patent No. 5,732,062) and in view of Minemura et al. (U.S. Patent No. 5,608,710).

Applicants respectfully traverse this rejection for at least the following reason.

Claims 26 and 33-36 depend from independent claims 21 and 31 and as noted above, Yokoi fails to teach or suggest the novel features recited in independent claims 21 and 31.

Minemura on the other hand discloses an optical disk drive and medium for improving rewrite times in order to increase the density of a phase-change optical disk by adapting a specific record pulse width modulation (column 1, lines 44-48). To achieve this, Minemura discloses recording a record mark with a length of NY as N adjacent spatially-independent very-small amorphous points, each with a length of L or less. Thereby, because a melted area of one amorphous point does not reach an adjacent amorphous point, the flow of the record film is controlled to improve the rewrite life (column 1, lines 49-56). Accordingly, Minemura discloses a train of spatially-independent very-small amorphous point marks formed on a phase-change optical medium for stable high density recording and improved rewrite times. Minemura however, fails to teach or suggest the multi-pulse train, as recited in independent claims 21 and 31, upon which claims 26 and 33-36 depend. Therefore, Minemura fails to cure the deficiencies of Yokoi.

Accordingly, Applicants respectfully assert that the rejection of claims 26 and 33-36 under 35 U.S.C. § 103 (a) should be withdrawn because neither Yokoi nor Minemura, whether taken singly or combined, teach or suggest each feature of independent claims 21 and 31 upon which claims 26 and 33-36 depend.

#### **CONCLUSION:**

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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